

REMARKS/ARGUMENTS

Claims 1-9 and 19-23 are pending in this application. Claims 1, 3, 7, 19, 20, and 21 have been amended. No claim has been canceled. New claims 22 and 23 have been added. No new matter has been added. Applicants thank the Examiner for granting a telephone interview on February 7, 2007.

Claims 1-9 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tran et al. in view of Fischer et al. Applicants respectfully traverses the rejection. Claim 1 recites, "forming a buffer layer over the cell junctions, the buffer layer having a thickness of more than 200 Å; implanting second dopants of the first conductivity type through the buffer layer and into the cells junctions using a first energy level to form a plurality of plug ion-implantation regions of a given depth, the plug ion-implantation regions being configured to receive the contact plugs; implanting the second dopants of the first conductivity type through the buffer layer and into the cell junctions using a second energy level that is different from the first energy level to form the plug ion-implantation regions..."

Tran et al. does not disclose the above related features. For example, Tran et al. does not disclose the use of the buffer layer having a thickness of o more than 200 Å. Tran et al. does not disclose implanting the second dopants through the buffer layer using at least two different energy levels. Fischer et al. does not remedy the deficiency of Tran et al. Claim 1 is allowable.

Claim 3 depends from claim 1. Claim 3 recites, "wherein the blanket ion-implantation process proceeds by employing phosphorus ^{31}P with a dose ranging from about 1×10^{12} ions/cm 2 to about 3×10^{13} ions/cm 2 and an implantation energy ranging from about 80 keV to about 150 keV, wherein a dosage used for the blanket ion implantation process is higher than a resulting dosage of the plug ion-implantation regions to compensate for loss of the second dopants in the buffer layer." Tran et al. and Fischer et al., alone or in combination, do not disclose or suggest the above features. Claim 3 is allowable.

Claim 19 recites, "forming a buffer layer over the regions defined by the gate structures, the buffer layer having a thickness of more than 200 Å; and implanting second

dopants of the first conductivity type through the buffer layer and into the regions defined by the gate structures using a first energy level to form a plurality of plug ion-implantation regions of a given depth, the plug ion-implantation regions being configured to receive the contact plugs; and implanting the second dopants of the first conductivity type through the buffer layer and into the regions defined by the gate structures using a second energy level that is different from the first energy level to form the plug ion-implantation regions, wherein the cell junctions and the plug ion-implantation regions are defined with in the well." Tran et al. and Fischer et al., alone or in combination, do not disclose or suggest the above features. Claim 19 is allowable.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

/Steve Y. Cho/

Steve Y. Cho
Reg. No. 44,612

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 206-467-9600
Fax: 415-576-0300
Attachments
SYC:cmf
61014109 v1